

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|   |  |                                      |
|---|--|--------------------------------------|
| Applicant's or agent's file reference<br>800184WO   | FOR FURTHER ACTION    See Form PCT/IPEA/416              |                                      |
| International application No.<br>PCT/FI 2002/000728                                       | International filing date (day/month/year)<br>10.09.2002 | Priority date (day/month/year)<br>-- |
| International Patent Classification (IPC) or national classification and IPC<br>H04Q 7/38 |  |                                      |
| Applicant<br>Nokia Corporation et al  |  |                                      |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

|   |   |
|---|---|
| Date of submission of the demand<br><br>06.02.2004  | Date of completion of this report<br><br>10.12.2004                               |
| Name and mailing address of the IPEA/SE<br>Patent- och registreringsverket<br>Box 5055<br>S-102 42 STOCKHOLM<br>Facsimile No. +46 8 667 72 88 | Authorized officer<br><br>Catharina Karlsson/ELY<br>Telephone No. +46 8 782 25 00 |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI 2002/000728

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))  
☐ publication of the international application (under Rule 12.4)  
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☒ the international application as originally filed/furnished

☐ the description:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ the claims:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ the drawings:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI 2002/000728

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

|                               |        |                            |     |
|-------------------------------|--------|----------------------------|-----|
| Novelty (N)                   | Claims | <u>10-13, 15-17, 19-21</u> | YES |
|                               | Claims | <u>1-9, 14, 18</u>         | NO  |
| Inventive step (IS)           | Claims | _____                      | YES |
|                               | Claims | <u>1-21</u>                | NO  |
| Industrial applicability (IA) | Claims | <u>1-21</u>                | YES |
|                               | Claims | _____                      | NO  |

2. Citations and explanations (Rule 70.7)

The claimed invention relates to a method of performing compressed mode measurements for selection of communication means. Information on all communication means belonging to a network element is provided. Based on the collected information, the communication means are ranked in a certain order, and the compressed mode measurements are performed based on the ordering.

Documents cited in the International Search Report:

D1: WO 01058197 A1  
D2: WO 0120942 A1  
D3: WO 0247423 A2

D1 describes a mobile station (UE), which creates a list of base stations with transmission quality between the thresholds Th1 and Th2, (p.12 lines 1-24). For a base station with a transmission quality below Th1, the compressed mode is activated, e.g. the compressed mode measurement is performed based on the list, (p. 12 lines 1-4). This solves the problem that the compressed mode measurements are costly, (p.4, lines 11-25) by reducing the measurements (p.4 lines 16-25).

Thus, in D1, information (=signal strength measurements) associated with the base stations is provided to a network element, and the base stations are ordered based on the information. The compressed mode measurements are made based on the ordering, (p.3 line 28-p.4 line 9). The actual handing-over may be between different frequencies, (p.3 lines 28-34), or radio access technologies (GSM to UMTS and vice versa),

.../...

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

(p.4 line 32-p.5 line 4). Consequently, claims 1-9, 14 and 18 lack novelty.

The problem concerning how to best process or define the parameters constituting the information mentioned above must be solved. The solutions presented in claims 10-13 add nothing beyond the scope of the ordinary skill of persons occupied in the field. Thus, these claims lack an inventive step.

The problem concerning which network elements to use for implementing the invention is also solved in a straightforward, non-inventive way. Thus, claims 15-17 also lack an inventive step.

Another problem that has to be solved is in which order the base stations (communication means) should be ranked.

D3 reveals how statistics are collected to determine handover thresholds, (abstract), and how cell loads are taken into consideration, (p.18 lines 23-30) when these thresholds are determined.

Since both document D1 and D3 relate to the same technical field, it is considered obvious to a person skilled in the art to apply the solution revealed in D3. Accordingly, claims 19-21 also lack an inventive step.

D2 deals with active sets (first order) of base stations and virtual active sets (second order) of base stations. In D2 an active set of base stations in the user equipment is updated (=base stations are re-ordered), after measurements triggered by specific events (=information on the base stations). See p.12 line 19-p.13 line 20, and p.14 line 30-p.15 line 4. Compressed mode measurements based on said ordering may be performed, (p.37 line 8-p.38 line 2).

A person skilled in the art easily implements a method similar to that of the claimed invention by using D2 as a starting point. Thus, claims 1-18 lack an inventive step. Claims 19-21 also lack an inventive step, since it is considered obvious to a person skilled in the art to apply the solution revealed in D3 in connection with the method disclosed in D1.